QC ABSTRACT

NAME OF WORK: "Improvements to Concrete Drains in Gate Playa Shettyhalli Ward No.12 Shettyhalli Sub Division"

SL NO	Item Of Work	Name of Test	Frequency of Test/Quantity	Executed Quantity	Number of Tests Required	Number of Tests Conducted
	Materials					
1	Cement	Fineness by dry sieving	One Test		1	1
		Finess by Air permeablity method	One Test		1	1
		Density	One Test		1	1
		Standard Consistency	One Test		1	1
		Initial Setting time	One Test		1	1
		Final Setting time	One Test		1	1
		Soundness (Le Chatelier's Method)	One Test		1	1
		Compressive Strength	One Test		1	1
2	Coarse aggregate(40 mm down size)	SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
3	Coarse aggregate(20 mm down size)	SIEVE ANALYSIS	One Test		1	1
		Flakiness Index	One Test		1	1
		Elongation Index	One Test		1	1
		Specific Gravity	One Test		1	1
		Bulk Density(Loose)	One Test		1	1
		Bulk Density(Compacted)	One Test		1	1
		Water Absorption	One Test		1	1
		Aggregate crushing Value	One Test		1	1
		Aggregate Impact Value	One Test		1	1
4	Fine aggregate	SIEVE ANALYSIS	One Test		1	1
		Water Absorption	One Test		1	1
		Specific Gravity	One Test		1	1
		Material finer than 75 micron	One Test		1	1
5	Steel	Bend test	One Test		1	1
		Tensile Test	One Test		1	1
		Yield Test	One Test		1	1
		ReBend test	One Test		1	1
6	Precast (100mm)	Core Compressive Strength	One Test		1	1
		Corrected Cylinder Compressive Strength	One Test		1	1
		Equivalent Cube Compressive Strength	One Test		1	1
7	Precast (250mm)	Core Compressive Strength	One Test		1	1
		Corrected Cylinder Compressive Strength	One Test		1	1
		Equivalent Cube Compressive Strength	One Test		1	1
8	RCC(M25)	Compressive Strength(7days and 28days)	8 set /200-250 cum	201.65	16	16
9	Cement Concrete Pavemet (M20)	Compressive Strength(7days and 28days)	7 set /150-200 cum	198.68	8	8
10	GSB	SIEVE ANALYSIS	One Test		1	1

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TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	CP-2021-01-13-44 **Date: 15-05-20**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.
Project Name	:	"Improvements to Concrete Drains in Gate Playa Shettyhalli Ward No.12 Shettyhalli Sub Division"
Agency	:	M/S Technical Manger (West), Karnataka Rural Infrastructure Development Limited, No.280, 59th Cross, 17th C Maain Road, 3rd Y Block Rajaji Nagara, Bangaluru-560010
Customer's Reference	:	EE/DD/W.O/594/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	12-05-20
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 (Part 1,2 3,4,5, 6,11):1988 IS 4031 Part 1 DETERMINATION OF FINENESS BY DRY SIEVING, Clause 4.4 IS 4031 Part 2, Determination of Fineness by Blaine Air Permeability Method, Clause 5 IS 4031 Part 3, Determination of Soundness, Clause 5,Clause 6 IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 5, Determination of Initial & Final Setting Time, Clause 5 IS 4031 Part 11,DETERMINATION OF DENSITY , Clause 6
Date of test	:	13-05-20
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

Sl.No.	Physical properties	Results	Requirement as per IS 12269: 2013
1	Fineness by dry sieving (%)	1.85	–
2	Finess by Air permeablity method (m^2/kg,Min)	348.6	225m^2/kg, Min
3	Density (gm/cc)	3.15	–
4	Standard Consistency (%)	28.5%	Not specified
5	Initial Setting time	135 minutes	Not less than 30 minutes
6	Final Setting time	245 minutes	Not more than 600 minutes
7	Soundness (Le Chatelier's Method)	1.5mm	Not more than 10 mm

* The results obtained are satisfactory as per standard requirements.

Note:

The results pertain to the samples received and tested.

All information furnished by Customer/Representative

Any correction in the report will make this report invalid

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Samples will be disposed after 30 days from the date of issue of test certificate

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R RUDRAPRASAD
Authorized Signatory
Technical Manager

****End of Report****

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TEST REPORT OF PHYSICAL PROPERTIES OF CEMENT - 53 Grade

Lab ID	:	**CP-2021-01-13-44** **Date: 10-06-20**
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.
Project Name	:	"Improvements to Concrete Drains in Gate Playa Shettyhalli Ward No.12 Shettyhalli Sub Division"
Agency	:	M/S Technical Manger (West), Karnataka Rural Infrastructure Development Limited, No.280, 59th Cross, 17th C Maain Road, 3rd Y Block Rajaji Nagara, Bangaluru-560010
Customer's Reference	:	EE/DD/W.O/594/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	12-05-20
Sample Type	:	Birla Super 53grade
Reference to BIS codes	:	IS 12269 : 2013, 53 Grade Ordinary Portland cement Specification , IS 4031 Part 4, Determination of Consistency of Standard Cement Paste, Clause 5 IS 4031 Part 6, Determination of Compressive Strength, Clause 6
Date of test	:	13-05-20
Environmental Conditions during test	:	Temperature: 26°C Humidity: 72%

Compressive Strength			
Sl.No.	**Physical properties**	**Results**	**Requirement as per IS 12269: 2013**
1	3 Days	28.5N/mm^2	Not less than 27 N/mm^2
2	7 Days	39.0N/mm^2	Not less than 37 N/mm^2
3	28 Days	58.5N/mm^2	Not less than 53 N/mm^2

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Technical Manager

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TEST REPORT ON COARSE AGGREGATES

Date: 15-05-20

Lab ID	:	CP-2021-01-13-44
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.
Project Name	:	"Improvements to Concrete Drains in Gate Playa Shettyhalli Ward No.12 Shettyhalli Sub Division"
Agency	:	M/S Technical Manger (West), Karnataka Rural Infrastructure Development Limited, No.280, 59th Cross, 17th C Maain Road, 3rd Y Block Rajaji Nagara, Bangaluru-560010
Customer's Reference	:	EE/DD/W.O/594/2019-20
Source of Sample	:	Sample supplied by Agency
Sample condition	:	Satisfactory
Date of Receipt	:	12-05-20
Sample Type	:	40mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	12-05-20

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 40MM DOWN COARSE AGGREGATE:

Total weight taken : 15000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	80 mm	0	0	0.0	100	100
2	40 mm	215	215	1.4	98.6	90-100
3	20 mm	7455	7670	51.1	48.9	30-70
4	10 mm	4266	11936	79.6	20.4	10-35
5	4.75 mm	2844	14780	98.5	1.5	0-5
6	Pan	220	15000	100.0	0	---

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2021-01-13-44** **Date: 15-05-20**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	11.9	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	12.3	
3	Specific Gravity	2.64	–
4	Bulk Density(Loose) (Kg/l)	1.41	–
5	Bulk Density(Compacted) (Kg/l)	1.47	–
6	Water Absorption(%)	0.23	–

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Technical Manager

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Format No: CP/TF/01

TEST REPORT ON COARSE AGGREGATES

Date: 14-05-20

Lab ID	:	CP-2021-01-13-44
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.
Project Name	:	"Improvements to Concrete Drains in Gate Playa Shettyhalli Ward No.12 Shettyhalli Sub Division"
Agency	:	M/S Technical Manger (West), Karnataka Rural Infrastructure Development Limited, No.280, 59th Cross, 17th C Maain Road, 3rd Y Block Rajaji Nagara, Bangaluru-560010
Customer Reference	:	EE/DD/W.O/594/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	12-05-20
Sample Type/ Size	:	20mm down size coarse aggregate
Reference to BIS codes	:	IS: 383:2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1,3,4) RA2011 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption IS 2386 Part 4: Mechanical Properties
Date of test	:	12-05-20

SIEVE ANALYSIS (PARTICLE SIZE DISTRIBUTION) OF 20MM DOWN COARSE AGGREGATE:

Total weight taken : 5000 grams

Sample No.	Sieve No.	Weight Retained in gms	Cumulative Weight Retained in gms	% Cumulative Weight Retained	% Passing	Required as per IS 383:2016
1	40 mm	0	0	0	100	100
2	20 mm	245	245	4.9	95.1	90-100
3	10 mm	2635	2880	57.6	42.4	25-55
4	4.75 mm	1780	4660	93.2	6.8	0-10
5	Pan	340	5000	100	0	–

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TEST REPORT ON COARSE AGGREGATES

Lab ID : **CP-2021-01-13-44** **Date: 14-05-20**

PHYSICAL PROPERTIES

Sl.no	Tests	Result	Requirements as per IS:383-2016
1	Flakiness Index(%)	9.4	Combined Flakiness & Elongation Index Shall not Exceed 40% for Uncrushed & Crushed Aggregate
2	Elongation Index(%)	10.5	
3	Specific Gravity	2.66	-
4	Bulk Density(Loose) (Kg/l)	1.52	-
5	Bulk Density(Compacted) (Kg/l)	1.56	-
6	Water Absorption(%)	0.21	-
7	Aggregate crushing Value(%)	24.1	Max 30% for Aggregates to be used in concrete for wearing Surface, In case Aggregate Crushing Value Exceeds 30% then the test for ten percent fines should be conducted for Aggregates to be used in concrete other than for wearing Surface.
8	Aggregate Impact Value(%)	23.7	30% for Aggregates to be used in concrete for wearing Surface, 45% for Aggregates to be used in concrete other than for wearing Surface.

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TEST REPORT OF FINE AGGREGATE

Date: 14-05-20

Lab ID	:	CP-2021-01-13-44
Customer	:	Assistant Executive Engineer, Shettyhalli Sub Division, BBMP, Bangalore.
Address	:	Shettyhalli Sub Division, BBMP, Bangalore.
Project Name	:	"Improvements to Concrete Drains in Gate Playa Shettyhalli Ward No.12 Shettyhalli Sub Division"
Agency	:	M/S Technical Manger (West), Karnataka Rural Infrastructure Development Limited, No.280, 59th Cross, 17th C Maain Road, 3rd Y Block Rajaji Nagara, Bangaluru-560010
Customer's Reference	:	EE/DD/W.O/594/2019-20
Source of Sample	:	Sample supplied by Agency
Sample Condition	:	Satisfactory
Date of Receipt	:	12-05-20
Sample Type	:	Fine Aggregate
Reference to BIS codes	:	IS 383 : 2016 (Specification for Coarse and fine Aggregates) IS: 2386 :1963(Part - 1, 3) RA2012 IS 2386 Part 1: Particle Size and Shape IS 2386 Part 3: Specific gravity, Density, Voids,Water Absorption
Date of test	:	12-05-20
Total weight taken	:	1000 grams

Sl.no	Sieve Size	Weight Retained (gms)	Cumulative Weight Retained (gms)	% Cumulative Weight Retained	% Passing	Requirement as per IS 383:2016			
						Grading Zone I	Grading Zone II	Grading Zone III	Grading Zone IV
1	10 mm	0	0	0.0	100.0	100	100	100	100
2	4.75 mm	27	27	2.7	97.3	90-100	90-100	90-100	95-100
3	2.36 mm	55	82	8.2	91.8	60-95	75-100	85-100	95-100
4	1.18 mm	239	321	32.1	67.9	30-70	55-90	75-100	90-100
5	600 micron	205	526	52.6	47.4	15-34	35-59	60-79	80-100
6	300 micron	203	729	72.9	27.1	5-20	8-30	12-40	15-50
7	150 micron	191	920	92.0	8.0	0-10	0-10	0-10	0-15
8	Pan	80	1000	100.0	0.0	---	---	---	---

Result :The tested Sample Conforms to Grading Zone II

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